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Report

Email Authenticity Analysis

Ameriway Corporation v. Chen, et al (cv. 1:19-cv-09407-VSB-VF)

Company: Data Narro, LLC

Author: Kristian Lars Larsen

Contributor: Erik Thompson

Email: Lars@datanarro.com

Phone: (262) 393-1713

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Introduction

The purpose of this report is to summarize the findings of an analysis performed by Data Narro, a digital forensics and e-discovery firm based in Milwaukee, WI.

In August of 2022, Data Narro was contracted to examine two email printouts to determine their authenticity. Questions had been raised about their authenticity based on several formatting issues that appeared to violate the expected format of Microsoft Outlook email printouts.

The Emails in Question

Data Narro examined two emails (Doc 157-1 and Doc 157-3), both provided as PDFs. It appears that these emails were not produced from an original electronic source, but were created by scanning paper printouts. The resulting document is provided in black and white at a resolution of 72 dots per inch (dpi).

Copies of these emails are included in Appendix A.

Formatting Issues

These emails appear to be standard “memo style” printouts from Microsoft Outlook. While there are multiple versions of Outlook (2010, 2013, 2016, 365, etc.), they all have nearly identical options for printing. The “memo style” option allows you to printout an email that includes the following basic header information.

Title Bar	
From:	Sender Identification
Sent:	Tuesday, April 14, 2011 1:02 PM ← Sent Date/Time Information
To:	Recipient Identification
Subject:	Subject Line
Attachments:	List of files attached to email separated by semicolons

Figure A: This area of the email will be referred to as the “memo header.” Example is provided above.

Outlook allows users to set the default font for the title bar and the header fields, but it doesn’t provide the ability to change anything else about the formatting. You can’t define multiple fonts within the memo header fields. **It is not possible to have multiple fonts, different character tracking/kerning, or spacing variations within the memo header fields. (See Reference section for supporting research publications.)**

Even a casual observer can notice the fundamental formatting anomalies with these emails. Closer examination only confirms there are significant formatting issues with these emails.

Fonts

The bulk of these emails are set in a variation of Times New Roman. This is one of the most ubiquitous fonts in use today, installed on almost all computers shipped in the last 20 years and is the default font used in many applications.

A problem we see with these emails is that the default header font is often interspersed with condensed and stretched versions of Times News Roman, which should not be possible. We believe these formatting inconsistencies are best explained by image manipulation/editing.

Specific Issues with Email Doc 157-1

1. Indentation problems in the From and Sent Fields

There are noticeable inconsistencies in the indentation of the From and Sent fields. This discrepancy is most prominent in the From field. We would expect these fields to be aligned flush left. Because these fields are formatted by Outlook and cannot be altered by the user, there is no reason this should occur in a legitimate email printout. **This is a strong indication of image editing.**

Info	
From:	May C < info@abilitycb.com >
Sent:	Tuesday, January 8, 2013 3:49 PM
To:	R [REDACTED] s.com
Subject:	service rate sheet, Power of Attorney & Terms of Condition
Attachments:	POWER OF ATTORNEY.docx; Terms and Conditions.pdf

Figure 157-1-1: A legitimate email printed in Microsoft Outlook would not have random variations in indentation for memo headers.

2. Letter tracking/kerning in the Sent field

If you look at the word “Tuesday” versus the word “January,” you will notice the latter has more space between letters; in typography this is known as “tracking.” Again, because Outlook controls the formatting of this memo field, this variation in tracking is not possible. **This is a strong indication of image editing.**

Info	
From:	May C < info@abilitycb.com >
Sent:	Tuesday, January 8, 2013 3:49 PM
To:	R [REDACTED] s.com
Subject:	service rate sheet, Power of Attorney & Terms of Condition
Attachments:	POWER OF ATTORNEY.docx; Terms and Conditions.pdf

Figure 157-1-2: The tracking between the word “Tuesday” and “January” is different, something that is not possible to control in Microsoft Outlook memo headers.

3. Different version of Times New Roman in header.

Throughout the email, multiple variation of Times New Roman are being used. This, however, should never occur in the header. We can see a striking example of this variation on the Subject and Attachment lines by looking at the capital letters "T" and "C" in the words "Terms" and "Conditions." The font in the Subject line has condensed capital characters and is visibly different from the version in the Attachments line. **This is a strong indication of image editing.**

Info

From: May C <info@abilitycb.com>
Sent: Tuesday, January 8, 2013 3:49 PM
To: R [REDACTED]s.com
Subject: service rate sheet, Power of Attorney & Terms of Conditions
Attachments: POWER OF ATTORNEY.docx; Terms and Conditions.pdf; rate sheet.docx

Figure 157-1-3a: In the image above, you will notice variations in the fonts used in the header. See the next figure for specifics.

[REDACTED]

May C <info@abilitycb.com>
Tuesday, January 8, 2013 3:49 PM
R [REDACTED]s.com
service rate sheet, Power of Attorney & Terms of Conditions
POWER OF ATTORNEY.docx; Terms and Conditions.pdf; rate sheet.docx

Figure 157-1-3b: In the image above, you can see different fonts used in these two lines. Pay particular attention to the capital letters "T" and "C."

Specific Issues with Email Doc 157-3

1. Extra spaces in the Sent date field

If you examine the date formatting within the Sent (date) field, you will notice extra spaces. Because this date is formatted by Outlook, there is absolutely no reason that it would insert spaces that vary in size. Each space should be uniform in width. **This is a strong indication of image editing.**

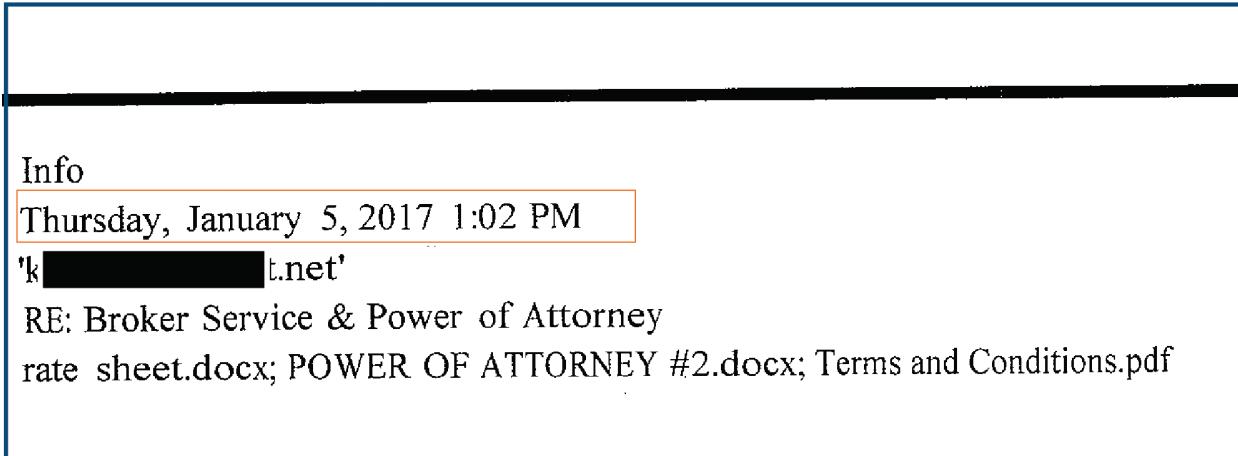


Figure 157-3-2a: There are extra-large spaces between many of the elements of the date. We would expect uniform spacing.

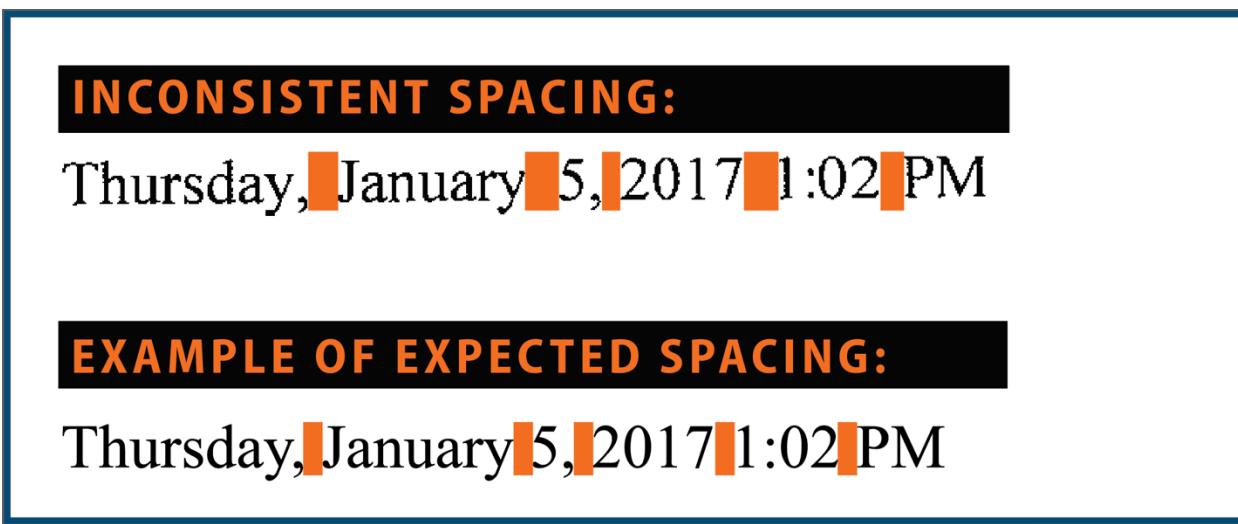


Figure 157-3-2b: This illustration contrasts the email's unexpected spacing (top) vs. normal, uniform spacing that would be expected. (Times New Roman was used in this example.)

2. Different version of Times New Roman in header.

Look at the phrase “Terms and Conditions” in the Attachments line. It appears more condensed than most other text in the header. This should not be possible. **This is a strong indication of image editing.**

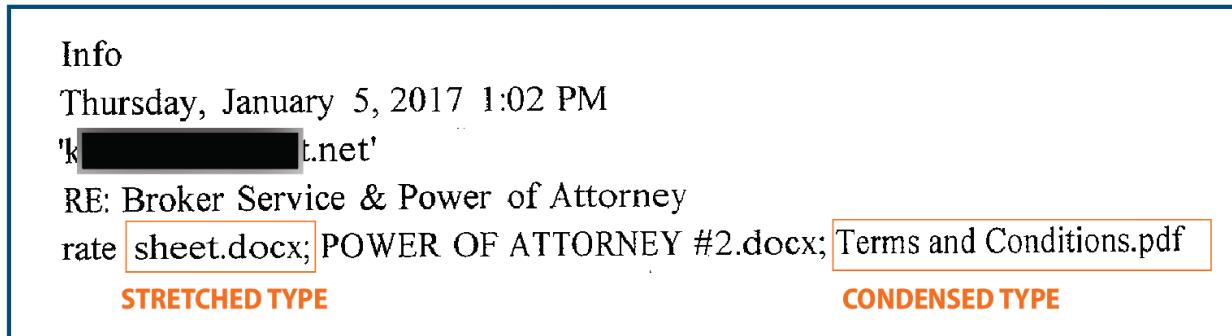


Figure 157-3-3: This figure highlights that the condensed font used for “Terms and Conditions.pdf” differs greatly from the font used in “sheet.docx” that appears on the same line.

Summary of Findings

After thoroughly reviewing the two emails in question, Data Narro finds these documents are highly suspicious. **There is clear and convincing evidence that the emails have been edited in some manner.** The multiple formatting inconsistencies found in these PDFs are significant and should never occur with a legitimate email.

I ruled out poor scanning as the reason for these formatting inconsistencies. I do not see any distortion or warping of the image that could explain these formatting issues.

Furthermore, I have ruled out “forced justification” as a reason for the formatting variations. When text is placed in a forced justification format, extra space can be added between words and letters to force text to align to both the left and right side of a text column. However, email headers use left justification, which will not introduce this type of spatial variation.

My background in forensics/e-discovery experience coupled with 30-year background in graphic design/typography allow me to discern variations in type and fonts that others may overlook. I base my opinions/conclusions in this report upon easily understood features and functions of Microsoft software products that can be verified by research and demonstrated using real-world testing.

Compensation for analysis and report authoring is billed at Data Narro’s standard digital forensics rate of \$300/hour.

Respectfully,



Kristian Lars Larsen
E-Discovery Director,
Data Narro – Digital Forensics & E-Discovery
320 E. Buffalo Street, Suite 605
Milwaukee, WI 53202

(262) 393-1713
lars@datanarro.com

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Microsoft. (n.d.). *Print contacts, messages, or other Outlook items*. Retrieved September 1, 2022, from <https://support.microsoft.com/en-us/office/print-contacts-messages-or-other-outlook-items-d2c0b12b-e308-41ce-9016-a3089ebdbe38>

About this Report's Author

Kristian Lars Larsen, eDiscovery Director

Kristian Lars Larsen was the author of this report and serves as eDiscovery Director for Data Narro. Lars brings effective and affordable eDiscovery solutions to Data Narro's clients, drawing on 25 years of technology experience in application development, data analysis, and project management. Lars also has significant expertise in multimedia production and handles all investigations involving digital photo and video evidence for Data Narro.

Lars is a Certified eDiscovery Specialist (CEDS) and a certified Project Manager for DISCO and iCONECT eDiscovery review platforms. He serves on the ACEDS Wisconsin Chapter Board of Directors. In addition, he is a frequent author, providing relevant articles and e-books to the e-discovery and digital forensics community.

Erik Thompson, Director of Digital Forensics

Erik Thompson contributed expertise to this report. Erik leads Data Narro's digital forensic division, bringing twenty years of digital forensics and computer security

experience to the table. Over the years, Erik has developed proprietary forensic investigation techniques and methodologies and has served as an instructor and lecturer for dozens of classes and seminars. He's managed over 850 investigations and testified in dozens of court cases as an expert witness.

About Data Narro

Data Narro is a Milwaukee-based digital forensics and eDiscovery consulting firm with clients throughout the Midwest. Data Narro specializes in helping law firms, businesses, and government agencies collect, process, and analyze electronically stored information for the purposes of investigation and litigation. Formed in 2018, Data Narro has extensive experience working in legal matters, both civil and criminal, and is the preferred digital forensics and eDiscovery provider for many top Wisconsin-based law firms.

Appendix A: The Emails

The following 2 pages contain the emails titled Document 157-1 Document 157-3.

Info

From: May C <info@abilitycb.com>
Sent: Tuesday, January 8, 2013 3:49 PM
To: R [REDACTED] s.com
Subject: service rate sheet, Power of Attorney & Terms of Conditions
Attachments: POWER OF ATTORNEY.docx; Terms and Conditions.pdf; rate sheet.docx

Dear R [REDACTED]

Thank you for contacting Ability Customs Brokers for a service inquiry. The service rate sheet and Terms and Conditions are attached, please review it and let us know if you have any questions. Otherwise, please complete the attached Power of Attorney and return it back to me with an IRS document to verify your company's EIN number. For an individual importer, social security card and driver license copy is required to verify the social security number.

Best Regards,

May

Ability Customs Brokers
13910 Doolittle Dr
San Leandro, Ca 94577
T:510-347-5555
F:510-347-1555
WWW.abilitycb.com

Based on the current challenges at all the West Coast Ports due to terminal constraints, kindly note Ability Customs Brokers will not be held liable for any demurrage, standby time, per diem/detention and/or dry runs.

****Important !!! ****

U.S. Customs & Border Protection will commence full ISF enforcement on July 9, 2013 and will issue liquidated damages against the importer for non-compliance. The Importer Security Filing must be electronically filed with CBP no later than 24 hours prior to the departure of the vessel and it is the importer's responsibility to ensure that it is done. Liquidated damages assessed will be \$5,000 per violation so please contact broker to make sure that you supply the information in advance or make arrangements to have it filed.

Info

From: Info
Sent: Thursday, January 5, 2017 1:02 PM
To: 'k [REDACTED]@t.net'
Subject: RE: Broker Service & Power of Attorney
Attachments: rate sheet.docx; POWER OF ATTORNEY #2.docx; Terms and Conditions.pdf

Dear K [REDACTED]

Thank you for contacting Ability Customs Brokers for a service inquiry. Our service rate sheet and Terms of Conditions are attached, please review it and complete the attached Power of Attorney if you decide to hire us to handle your shipment. Please send the complete Power of Attorney with an IRS document, SS-4 or the 1st page company federal tax return to verify your company's EIN number to us if you satisfy our service charges. For an individual importer, social security card and driver license copy is required to verify the social security number.

Our service charges are not included any other third parties fees, such as freight agent document handling fee, customs exam, terminal fee, warehouse charge and trucking service, etc.

Please provide the Import Security Filing (ISF, 10+2) information to us prior to the vessel departure date from the export country to the U.S, we have to report it to the U.S customs before the vessel sailing date, if this is an ocean shipment. Also, we will contact the shipper/agent on behalf of your company for commercial invoice, packing list and bill of lading if you let us know their email contact. For any question or information, please contact us.

Best Regards,

Jenny

Ability Customs Brokers
13910 Doolittle Dr
San Leandro, Ca 94577
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F:510-347-1555
WWW.abilitycb.com

Based on the current challenges at all the West Coast Ports due to terminal constraints, kindly note Ability Customs Brokers will not be held liable for any demurrage, standby time, per diem/detention and/or dry runs.

****Important !!! ****

U.S. Customs & Border Protection will commence full ISF enforcement on July 9, 2013 and will issue liquidated damages against the importer for non-compliance. The Importer Security Filing must be electronically filed with CBP no later than 24 hours prior to the departure of the vessel and it is the importer's responsibility to ensure that it is done. Liquidated damages assessed will be \$5,000 per violation so please contact broker to make sure that you supply the information in advance or make arrangements to have it filed.

Appendix B: Additional Evidence

This appendix includes two additional examples of inconsistent or unexpected formatting. Individually, they do not provide conclusive proof of image editing or evidence tampering, but they provide additional evidence of inconsistent formatting, which are possible indications of image editing.

1. Email Doc 157-1: Font variations in email body

Within the body of an email, users can use different fonts as they wish. Still, they do not have access to advanced formatting features such as adjusting character tracking or controlling the font's horizontal compression. There are several examples of unexpected font variations within the email similar to the issues found in the header. **These are possible indications of image editing.**

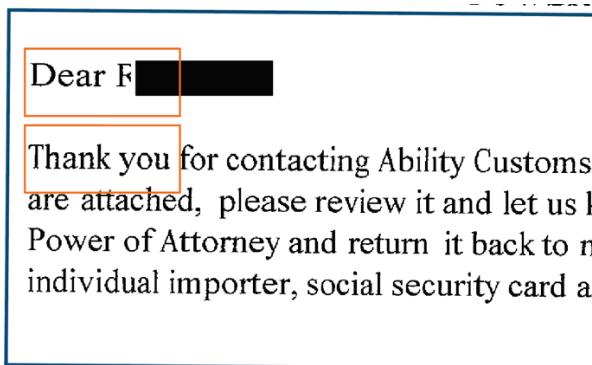


Figure 157-1-4: In the image above, the salutation line font is much wider than the paragraph below it. The body paragraph font is much more condensed.

2. Email Doc 157-3: Possible Email Title Issue

The email title “Info” is not bolded. By default, this title is bolded. However, users can change the title font by going deep into a preference menu. Also, notice that this font is larger than the rest of the header. While it is possible for the user to control this, but it is very unusual for a user to adjust this. **This is a possible indication of image editing.**

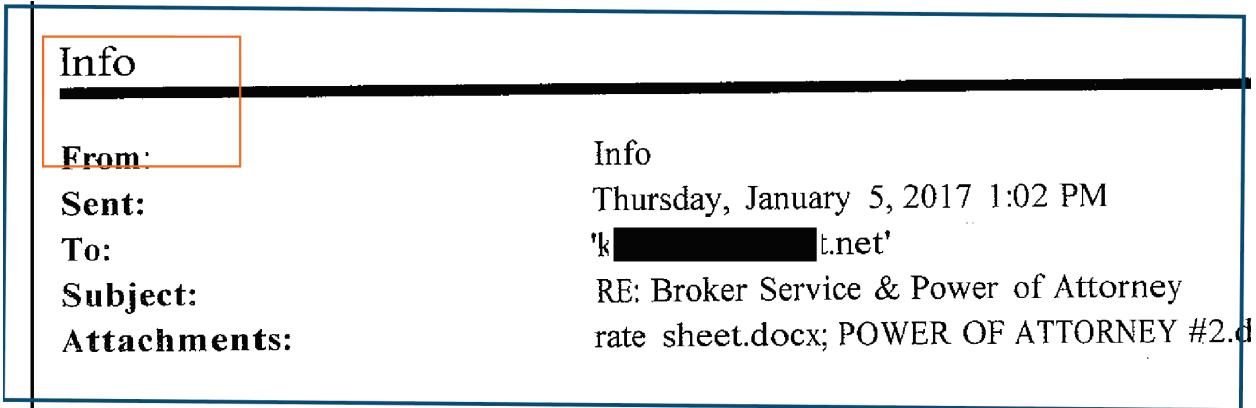


Figure 157-3-1: The title of the memo header is typically bolded, but here it is not.